

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of

Mitigation of Orbital Debris

IB Docket No. 02-54

**REPLY COMMENTS OF
SES AMERICOM, INC.**

SES AMERICOM, Inc. ("SES AMERICOM"), by its attorneys, hereby submits its reply to the comments filed in response to the Notice of Proposed Rulemaking (the "*NPRM*") issued by the Commission in the above-captioned proceeding.

I. Introduction

SES AMERICOM is a leading provider of satellite telecommunications services in the United States. Headquartered in Princeton, New Jersey, SES AMERICOM provides U.S. and international services through a fleet of 16 geosynchronous communications satellites. For most of its 25 years of operation (first as RCA American Communications, Inc., then as GE American Communications, Inc.), SES AMERICOM has provided service to broadcast and cable television programmers, as well as to the federal government and others. The company also has a long history of providing communications for the telephone industry, and, more recently, SES AMERICOM's geostationary satellites have been used for data communications, VSAT services, and

Internet transmissions. SES AMERICOM's parent company, SES GLOBAL, also owns SES ASTRA, a leading European satellite provider.

SES AMERICOM and every other satellite operator have a vested interest in adopting effective debris mitigation measures at every phase of a satellite's life. SES AMERICOM has an extensive satellite fleet and intends to continue to provide service by replacing its satellites at their end-of-life.¹ As detailed in the comments filed by the Satellite Industry Association (the "SIA Comments"), "economic and operational self-interest" drives satellite operators to design and operate their spacecraft for longevity and reliability and to relocate spacecraft to safe graveyard orbits.² Because of this operator self-interest, the Commission should minimize its regulation of orbital debris.

SES AMERICOM actively participated in developing the SIA Comments and fully supports the recommendations made in those Comments. SES AMERICOM notes that the SIA Comments have the support of all of SIA's members, which constitute substantially all of the major U.S. satellite manufacturers and operators.

II. The Commission Should Limit its Regulation of Orbital Debris.

In the *NPRM*, the Commission effectively acknowledged that orbital debris has not been a problem to date, but pointed to the need to take action to preserve "access to

¹ SES AMERICOM currently has pending at the Commission three applications to replace satellites that are nearing their end-of-life. *See* Application for Authority to Launch and Operate a C/Ku-Band Replacement Satellite, SAT-LOA 20020114-00008 (AMC-9 to replace AMC-5 and Satcom C-1); Application for Authority to Launch and Operate a C-Band Replacement Satellite, SAT-LOA 20020104-00001 (AMC-10 to replace Satcom C-3); and Application for Authority to Launch and Operate a C-Band Replacement Satellite, SAT-LOA 20020104-00002 (AMC-11 to replace Satcom C-4).

² SIA Comments at 2.

space for the long term.”³ SES AMERICOM understands and shares the Commission’s desire to minimize orbital debris in order to preserve the usefulness of space for commercial and governmental activities. However, as stated by SIA, the costs of regulation must be weighed carefully against the potential benefits.⁴ SES AMERICOM believes that the Commission should not impose regulations where they are unnecessary, or will not achieve the intended purpose, or where the costs outweigh the intended benefit.

Contrary to the assertion of the University of Mississippi’s National Remote Sensing and Space Law Center (“Space Law Center”), the commercial self-interest of satellite operators is sufficient incentive to practice orbital debris mitigation.⁵ Satellite operators have billions of dollars invested in existing orbital resources, and satellites worth billions of dollars more are in the planning stages. Clearly, satellite operators have a substantial interest in protecting the commercial viability of these vital, valuable and expensive space assets.

The SIA Comments make the point that currently there is a “very, very small risk” that commercial satellites will be a source of orbital debris. Yet the cost of regulation could be high, and could involve the Commission in spacecraft design and operational decisions, matters as to which the Commission has heretofore been reluctant

³ *NPRM* at ¶ 1.

⁴ SIA Comments at 4.

⁵ Space Law Center Comments at 2 (stating that economic incentives are not sufficient).

to become involved.⁶ For these and other reasons articulated by SIA, the Commission should minimize any regulatory requirements related to mitigation of orbital debris.

The Commission should reject the suggestions of the Space Law Center to mandate adherence to the U.S. Government standard practices and to adopt detailed rules regarding orbital debris mitigation plans.⁷ The Space Law Center overlooks the commercial realities of the satellite market and satellite regulation, fails to identify concrete benefits to be achieved by its suggestions, and ignores the costs involved in implementing them. The Space Law Center also recommended that the Commission address satellite design decisions in its new rules and require operators to provide a cost-benefit analysis regarding debris mitigation;⁸ this suggestion too should be rejected. As noted by SIA, the Commission has previously recognized that satellite design is best left to the operator.⁹

III. Current Practices Are Sufficient Protection Against Orbital Debris.

SES AMERICOM has adopted debris mitigation measures in the design, construction, and operation of its geostationary satellites. It also coordinates closely with fellow satellite operators during any satellite drift maneuvers, providing operators of neighboring satellites with advance notice of the path of a satellite's drift. SES

⁶ See *id.* at 3-4. See also Comments of PanAmSat Corporation ("PanAmSat Comments") at 5.

⁷ Space Law Center Comments at 2.

⁸ *Id.*

⁹ SIA Comments at 4, *citing* Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile-Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, *Notice of Proposed Rulemaking*, 9 FCC Rcd 1094, 1100-01 (1994).

AMERICOM agrees with SIA that the Commission should “continue to rely on the existing (and successful) self-assessment process as well as on the fact that every operator has a commercial interest in building a robust spacecraft that will survive for 15 to 20 years after which that satellite would be replaced by the same operator.”¹⁰

As a result, the Commission should reject any suggestions made by commenters for additional regulation. For example, Telesat Canada suggests that a “centralized database” is needed for satellite maneuvers.¹¹ SES AMERICOM agrees with Telesat Canada that the burden of notification should rest with the operator conducting maneuvers to inform all other potentially affected operators, but does not believe that more is needed. Operators currently notify other operators regarding maneuvers; a centralized database is simply not necessary.

Imposing a deposit prior to launch, to guarantee safe de-orbiting, should also not be required.¹² The suggestion raises numerous questions, such as how the Commission would determine that a satellite has reached the correct orbit, how it would determine what the correct amount of a bond should be, and what would happen if the operator tries but fails, through no fault of its own, to reach the requisite orbit. More importantly, again, it is not necessary. Historically, U.S.-licensed geostationary satellites have been removed to safe disposal orbits. In the more than 25 years of commercial satellite industry history, there has not been one instance in which a commercial satellite has caused a collision.

¹⁰ SIA Comments at 8.

¹¹ Telesat Canada Comments at 7-8.

¹² Comments of Victor J. Slavinski at 1.

Finally, SES AMERICOM agrees with PanAmSat and SIA that the Commission need not regulate the post-mission disposal of geostationary satellites.¹³ But if the Commission decides that it must regulate in this area, then SES AMERICOM supports the proposal put forth by SIA for geostationary satellites -- that the minimum disposal orbit be the lower of (i) the orbit calculated by using the IADC formula, or (ii) 300 kilometers above the geostationary orbit.¹⁴ Any new regulation, however, should apply prospectively, as both SIA and PanAmSat urge.¹⁵ Satellite operators have constructed their satellites – and priced their services – with certain de-orbit assumptions. As PanAmSat notes, “it would be inequitable to change” the rules on which operators relied.¹⁶

IV. The Commission Should Not Mandate Insurance Coverage.

SES AMERICOM agrees with SIA and AON SPACE, Inc. (“AON”) that the Commission should not require satellite operators to obtain insurance coverage of orbital debris risks.¹⁷ As a company wholly dedicated to risk management of space-related projects, AON speaks with real authority on the availability and cost of insurance. AON made a number of important points regarding the burden a mandatory insurance requirement might place on domestic commercial satellite operators, the limitations on the availability of insurance, and the reluctance of insurers to insure risks with which they

¹³ PanAmSat Comments at 3; SIA Comments at 14.

¹⁴ SIA Comments at 14.

¹⁵ *Id.* at 15; PanAmSat Comments at 6.

¹⁶ PanAmSat Comments at 6.

¹⁷ *See* SIA Comments at 16-17; Comments of AON SPACE, Inc. at 6-8.

have little experience. SES AMERICOM particularly wishes to underscore that requiring insurance of risks in the maneuver and de-orbit phase of a satellite's life will reduce the resources available to satellite operators to insure adequately against losses during launch, where the potential for loss is real.

V. Debris Mitigation Rules Should Apply to All Service Providers.

SES AMERICOM supports the SIA position that all satellite service providers should be subject to the same requirements regarding debris mitigation.¹⁸ To decide otherwise would place U.S. licensees at a competitive disadvantage in the U.S. and global satellite markets. While it may be possible, as suggested by Telesat Canada, to reach bilateral arrangements regarding orbital debris mitigation measures in lieu of requiring compliance with the Commission's Rules,¹⁹ such agreements take time to negotiate. As a result, until a bilateral agreement is reached with a particular country, the relevant non-U.S. licensed satellites should be subject to the same Commission Rules as U.S. licensees, so that the non-U.S. satellites do not have a competitive advantage in the U.S. market.

¹⁸ SIA Comments at 18.

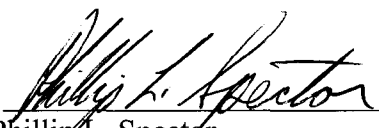
¹⁹ Telesat Canada Comments at 8-9.

VI. Conclusion

In the absence of any evidence of a problem, the Commission should be reluctant to adopt regulatory requirements that might impose unnecessary costs on satellite operators. To protect their costly and valuable assets, SES AMERICOM and other commercial satellite operators have always in the past taken, and will of necessity continue to take, steps during the life of a satellite to avoid the creation of orbital debris. Commission regulation is simply unnecessary.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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